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CATCH1

A Test-facility for COMPASS Front-End Electronics

User Manual
Update for VME Block Transfer

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1 Changes for addressing the CATCH1

The latest version of the CATCH1's VME interface can handle block transfer requests to read front-end data from the FIFO-buffer. As shown in the table below the READ_FIFO command's offset address changed to %8000 (was %08). At this address the CATCH1 responds to both, single quad byte transfers and block transfers. For the block transfer block sizes of up to 32 kByte are allowed.

Other changes concern the two commands REFRAME and BISTEN which are no longer available and the modules base address. The two four bit rotary switches now are compared to the adress lines A23-A16 (was A15-A08) which results in a range for possible base addresses from

%E000 0000 to %E0FF 0000.

Table 1: Offset addresses of the CATCH1 commands

COMMAND	OFFSET	DATA WORD	
READ_ID	%00	D31-D00	CATCH1 identifier
READ_FIFO	**%8000**	**D31-D00**	**three data words from the front-end**
READ_STATUS	%10	D15-D07	status bits
READ_FPGA	%18	D31-D16	scaler values
WRITE_SERIAL	%40	D23-D00	setup data to front-end
WRITE_FPGA	%48	D31-D16	pattern, pulse height
WRITE_TRIG	%50	D03=1	User command
		D02=1	Clear command
		D01=1	Reset command
		D00=1	Trigger command
PROG_FIFO	%80	D31-D16	set FIFO flags
PROG_FPGA	%88	D07-D00:	data transferred:
		%01	enable programming pins
		%02	disable programming pins
		%04	set PROG pin to 0
		%08	set PROG pin to 1
		%10	set DIN pin to 1
		%20	set DIN pin to 0
		%40	set CCLK pin to 1
		%80	set CCLK pin to 0
REFRAME	**%98**	**D07-D00**	**no longer available**
BISTEN	**%90**	**D07-D00**	**no longer available**
RESET_FIFO	%C0	-	reset FIFO buffer
RESET_FPGA	%C8	-	reset Test Pulse Controller

2 Erratum: Internal Scalers of the Test Pulse Controller

In the actual design of the Test Pulse Control Unit the readout of the internal scalers for the four User Commands and Pattern Strobe does not work. Thus each attempt to read out one of the scalers results in obtaining a value of zero.

A new revision of this design will be provided soon.